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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,567	09/15/2003	John Dennis Clark	BRADBURY/10003	9742
34431	7590	08/04/2006	EXAMINER	
HANLEY, FLIGHT & ZIMMERMAN, LLC 20 N. WACKER DRIVE SUITE 4220 CHICAGO, IL 60606			CRANE, DANIEL C	
			ART UNIT	PAPER NUMBER
			3725	

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/662,567	CLARK, JOHN DENNIS	
	Examiner	Art Unit	
	Daniel C. Crane	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 09 May 2006.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 38,39,41-47,49-55,57-60,72-84 and 92-117 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 113-117 is/are allowed.

6) Claim(s) 38,39,41-47,49-55,57-60,72-84 and 92-112 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1)  Notice of References Cited (PTO-892)                            4)  Interview Summary (PTO-413)  
 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)                            Paper No(s)/Mail Date. \_\_\_\_\_.  
 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 5/9/06 & 6/2/06.                            5)  Notice of Informal Patent Application (PTO-152)  
 6)  Other: \_\_\_\_\_.

**REJECTION OF CLAIMS OVER PRIOR ART**

Claims 72, 74, 75, 77, 79- 82, 84, 92, 96-98, 101, 103, 104, 108 and 109 are rejected under 35 U.S.C. 102(b) as being anticipated by Jeuniaux (5,465,214). Jeuniaux makes evident at column 2, lines 28-40, that it is well known in this art that the wave height of the material can be used to determine any deviation in the fed material. Using this information, the defects in the material can be removed. Note that Jeuniaux states that in the Prior Art, “the height of the fiber to their vertical” can be used in the shaping of material. Accordingly, Jeuniaux recognizes within the prior art that the wave height of the material is used to determine the characteristics of the material prior to activating the leveling operation. Further, with respect to Jeuniaux’ invention, Figures 1 and 2 show where a plurality of sensor readings in the form of deviations is obtained by a plurality of laser mechanisms 8 arranged along the width of the material 3. These sensed readings provide heights of the material relative to a reference plane (see column 5, lines 34-47 and 56-60, and the last paragraph of column 6). Deviations are obtained in light of the fact that the measurements are taken from a distance away from the material to the material and determined relative to the reference surface Ox (Figure 2). Planarity is determined and the leveler is adjusted to correct the defects in the sheet material.

Claims 38, 39, 41-47, 49-55, 57-60, 73, 76, 78, 83, 93, 94, 95, 99, 100, 102, 105-107 and 110-112 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jeuniaux (5,465,214). The comments set forth in the preceding paragraph are incorporated herein. It is the examiner’s position that the travel length of the material is inherently obtained and used within the calculations in light of the fact that the travel

lengths  $xa$ ,  $xb$  and  $xc$  are obtained and clearly used in obtaining the height determinations. Thus, a travel length is obtained relative to a reference point and this length is used in the operation of the apparatus. While Jeuniaux does not describe how the travel length of the material is obtained as the material moves, Jeuniaux does obtain the speed of the material and correlates that with the distance readings. In this regard, the speed-reading and the length reading are comparable as both of the sensed conditions are used to provide a location of the condition of the material and any non-planarity sensed in the material. Accordingly, it would have been obvious to the skilled artisan at the time of the invention to have modified Jeuniaux' machine by using a length measurement instead of a speed measurement to specify a location on the material. Such would have been a matter of preference and dictated by cost and hardware availability. Further, because of the equivalent information being obtained and the identical result acquired, i.e., location on a moving material, this is considered obvious to the skilled artisan having the level of skill within the computer controlled rolling art. Since a flatness or planarity of the material is being obtained, a "certification level" of the material is obtained. Topographical information is determined because the curvature of the material is sensed.

## **RESPONSE TO APPLICANT'S COMMENTS**

Applicant's comments submitted May 9, 2006 in response to the Final Office Action mailed January 25, 2006 and after the request for an RCE have been considered.

Applicant maintains that claims 72 and 92 define over Jeuniaux because Jeuniaux allegedly does not disclose a *comparison* between the wave heights. However, as maintained and further discussed herein, it is the examiner's position that there is an inherent comparison in

the wave heights by virtue of the fact that Jeuniaux performs a measurement of the wave heights at distinct points, obtains a change in the heights and uses this information within a calculation to obtain a curvature of the material. A comparison in the heights is integrated within the calculations since this change or “comparison” between the two (or more) heights is used within the controlling system to establish planarity of the sheet material.

Applicant’s attention is directed to columns 4, 5 and 6 of Jeuniaux where the wave heights, which are defined in the y axis ( $y_a, y_b, y_c, \dots, y_i$ ), are all obtained through instantaneous measurements and compared by obtaining the change in height between the measured points. Specifically, applicant’s attention is directed to column 4, lines 50-65, where the change in height between points is obtained through a calculation of the difference between  $y_c$  and  $y_b$  distances and a difference between  $y_b$  and  $y_a$  distances. Continuing further into column 5, the calculations at line 5 and line 15, determine the curvature all based upon a comparison within the  $y_i$  distance changes. This is similarly clear from column 5 lines 52-60, where

“Knowing the time interval, between each sampling, as well as the speed  $V(t)$  of the strip 3 between these samplings, the file of measurements makes it possible to obtain, from the heights  $y_i$ , as in the known methods of measuring the shape and the planarity of a fiber, a function  $y=f(l)$  representing the *change in the measured height of the fiber* over the portion of the strip 3 which has run past under the measurement instruments 5, 6, 7 between the first sampling (of index 1) and the last sampling involved (of index n).” (emphasis added)

Attention is further directed to column 6, lines 6-9, and lines 15-18, where the change between the wave heights is obtained, thus, resulting in a “comparison” of the heights. Accordingly, it is clear from Jeuniaux’s specification that a “comparison” in wave heights is an integral part of the calculations such that these measured amounts are used in the control unit to obtain a planar sheet of material.

For the same reasons, advanced above, claim 77 is not found to define over the reference to Jeuniaux because the wave height and its attendant curvature is obtained and determined based upon these readings. As a result of these readings, a signal is generated to control the rolls to level the material is performed.

Claim 101 is even met more so by Jeuniaux in that deviation values are obtained in the  $y_i$  direction. This has been clearly noted in the discussion relating to claims 72 and 92 above, where the change in the measured height is used within the calculations taught by Jeuniaux in columns 4, 5 and 6 and based upon these calculations and their integrated comparisons, the load applied to the sheet material is adjusted accordingly. Contrary to applicant's comments, Jeuniaux clearly describes how the planarity is adjusted in that the information taken from the calculations is used to control the rolls 2, 2'. The specifics on "how" this is done are a moot argument because the claims do not go into detail on how the claimed "adjusting" is performed. Accordingly, applicant's argument is unsupported by the claimed invention.

Contrary to applicant's comments concerning the longitudinal zones, this is clearly shown by Jeuniaux in light of the fact that a first longitudinal zone is shown in Figure 1 where the readings are obtained along the running length of the material. As stated in the paragraph bridging columns 6 and 7,

"(i)n order to evaluate the shape and the planarity of the strip 3 over its entire width, it is necessary to arrange above it a plurality of sets of instruments such as the one which has been described, so as to determine the elongation ration  $A_m$  of a multiplicity of fibers."

Therefore, the longitudinal zones are configured across the width of the running length sheet material with readings clearly being taken across the width.

## **INDICATION OF ALLOWABLE SUBJECT MATTER**

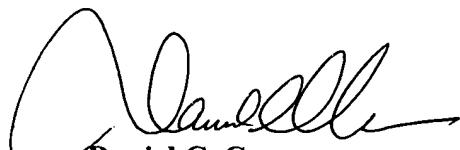
Claims 113-117 are allowed.

## **INQUIRIES**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner D. Crane whose telephone number is **(571) 272-4516**. The examiner's office hours are 6:30AM-5:00PM, Tuesday through Friday. The examiner's supervisor, Mr. Derris Banks, can be reached at **(571) 272-4419**.

Documents related to the instant application may be submitted directly to Group 3700 by facsimile transmission at all times. Applicant(s) is(are) reminded to clearly mark any transmission as "DRAFT" if it is not to be considered as an official response. The Group 3725 Facsimile Center number is **(571) 273-8300**. The examiner's FAX no. is **(571) 273-4516**.

DCCrane  
July 27, 2006



**Daniel C. Crane**  
Primary Patent Examiner  
Group Art Unit 3725